Ohio Scientific C8P 24K

03484
$34.95

HAYDEN SOFTWARE

SARGON II

A Computer Chess Program

Dan & Kathe Spracklen

The best microcomputer chess game!!

Adapted by Ohio Scientific

SARGON II

A Computer Chess Program

Dan & Kathe Spracklen

Copyright © 1980, Hayden Book Company, Inc. All rights reserved.

User's Guide to the OSI Version of SARGON II

In the interest of ever-better computer chess, we proudly present SARGON II. This chess program is greatly improved over the original SARGON program and includes several additional features that will make using it easier and more convenient. It is also a much tougher opponent. For beginners, level 0 has been included. When playing in level 0, SARGON's response is much faster than at other levels.

The actual playing algorithm for the chess game has changed considerably from SARGON I with the result that SARGON II plays a vastly superior game and at a quicker speed. During the player's move, the level of play to which the game has been set is displayed. During the computer's move, the ply number (as defined later) the computer is currently at is displayed.

At higher levels of play, the time between moves can be considerable; a flashing asterisk is displayed to indicate that the computer is thinking and hasn't accidentally hung up. For those players who need help every once in a while, a special hint mode has been included that will suggest a good (not necessarily the best) move that you can make. Finally, setting up the chessboard to analyze a particular situation has been simplified. Instead of having to step through each square on the board, any square can now be reached directly.

HARDWARE REQUIREMENTS

One C8P, C4P, or C1P with at least 16K memory, one cassette tape recorder, and one television set or video monitor.

—OR—

One C8P DF, C4P MF, or C1P MF with at least 24K memory, and one television or video monitor.

LOADING

After connecting all the required hardware, turn on your computer and all other accessories. First, reset the computer by hitting the **BREAK** key. Now, insert the disk or cassette into its proper device.

Simply hit **D** to load the disk version of SARGON II.

For the tape version of SARGON II: 1) hit **M** on the computer, 2) hit **PLAY** on the tape recorder, and 3) immediately hit **L** on the computer. Note: The volume level for the tape recorder should be set at a medium to high setting depending on the tape recorder, and the tone should be set at about 7 on a scale of 0–10. A checksum bootstrap will load first into hex address 3000 ($3000), followed by the checksum loading of SARGON II (about 15 minutes).

The title, author, and copyright notice will appear on the screen after SARGON II is completely loaded. The program will then tell you to select options and will begin the sequence described in the next section.

Using SARGON II

SARGON II has two modes to choose from at this point which allow you either to play a game from the beginning or to set up a board position from which to play. Choose your option when SARGON II asks:

NEW GAME, CHANGE BOARD, OR EXIT? (G,C,X):

Reply with **G** followed by **RETURN** for a new game, and **C** followed by **RETURN** to change the board.

IF YOU HAVE CHOSEN NEW GAME

SARGON II will now ask you:

YOUR COLOR? (B,W):

Hit **B** or **W** as you choose, remembering that the rules of chess specify that white moves first. Complete your choice by hitting **RETURN**.

SARGON II next asks:

LEVEL OF PLAY? (0–6):

Hit the number indicating the level of play you want, followed by **RETURN**. Each higher level increases SARGON II's computation time and playing skill. As the number of pieces on the board diminishes, SARGON II does not take dramatically less time to make a move. Instead, the look ahead increases automatically. (In SARGON I this required a manual change in ply level during the game.) Times per move, given below, are averages. Actual time for a given move may range from about 1/3 to 3 times the stated time.

	1 MHz	2MHz	GT option
Level 0	---------	Immediate Response	---------
1	20 seconds	10 seconds	6 seconds
2	1 minute	30 seconds	20 seconds
3	2 minutes	1 minute	40 seconds
4	6 minutes	3 minutes	2 minutes
5	40 minutes	20 minutes	12 minutes
6	4 hours	2 hours	1.3 hours

To Enter a Move

Moves must be entered in algebraic chess notation. This means you must tell SARGON the file and rank of the square coordinates of the squares you are moving from and to. The files are lettered A–H and the ranks are numbered 1–8. So, the coordinates of the board are:

	A	B	C	D	E	F	G	H	
8	A8	B8	C8	D8	E8	F8	G8	H8	8
7	A7	B7	C7	D7	E7	F7	G7	H7	7
6	A6	B6	C6	D6	E6	F6	G6	H6	6
5	A5	B5	C5	D5	E5	F5	G5	H5	5
4	A4	B4	C4	D4	E4	F4	G4	H4	4
3	A3	B3	C3	D3	E3	F3	G3	H3	3
2	A2	B2	C2	D2	E2	F2	G2	H2	2
1	A1	B1	C1	D1	E1	F1	G1	H1	1
	A	B	C	D	E	F	G	H	

The Board:

Due to the screen size of the C1Ps, the board and text can not be displayed on the same screen. So, on C1Ps only, when SARGON II goes into execution you will see text on the screen but not the board. You can flip back and forth between the board and the text simply by hitting the **ESC** key each time you want to flip. You can enter a move with the board displayed, but the listing of that move will not appear unless you flip back to the text.

> NOTE: Flipping back and forth during the computer's turn display the current moves thought about by SARGON II. When SARGON II decides on a move, the board will reset the pieces to their rightful positions and then SARGON II will make the move it has chosen.

The move itself is entered as FF–TT, so to play the king's pawn up two squares you would type:

E2-E4 RETURN

Actually, you can use anything in place of either the "–" or **RETURN**. If SARGON II responded with the corresponding move, it would print:

E7–E5 P

The "P" means that it was a pawn that moved. Likewise, your move will be rewritten to show that a pawn has moved.

If you make an error before hitting **RETURN**, just type **CTRL O** to erase the last typed character.

To Castle:

Just type the king's move and **RETURN**. The rook will tag along. For example, if you are white and you wish to castle king's side, type:

E1-G1 RETURN

You will see both your king and rook move. SARGON II will list it as 0–0 or 0–0–0 as in normal chess notation.

To Capture En Passant:

If you wish to capture one of SARGON II's pawns using the En Passant privelege, enter your pawn's move. After your pawn move is displayed, SARGON II's pawn will blink and vanish. When SARGON II captures En Passant, his move is displayed on the board in the same way. SARGON II prints it in the text as PXPEP.

Audible Signals:

SARGON II uses the DAC to beep to tell you that it has finished thinking and has made a move. It will honk to signal you that your move was illegal. It will *not* audibly signal a check, although it will note a check on the listing. It will beep rapidly several times in succession to signal a checkmate by either side.

Kibitz:

This is a hint to the player, giving what the computer thinks is his best move. It is available for most non-book moves. (Ah, but will SARGON II give you a move it doesn't have an answer for?) To get the computer to look over your shoulder in this fashion hit **CTRL K**.

NOTE: Kibitz was not designed to work at level 0. Although you may occasionally get it to work at that level, the moves it advises may not even be legal. Remember also the castle move is displayed differently from the way it is entered.

Level # and Ply #:

When the move listing is displayed you will see the Level # you have selected labeled and displayed in the upper left-hand portion of the screen. Once SARGON II gets beyond

its opening "book" moves you will also see the Ply # (unlabeled) displayed in the right-hand corner of the screen directly across from the Level #.

The Ply # is the number of half-moves ahead of the current move that the computer is currently searching. A Ply of 3, for instance, indicates that the computer has already examined its possible moves and your possible countermoves, and is currently examining its possible replies to your countermoves. The Level # you choose at the beginning of the game, or after changing the board, represents the minimum Ply to which the computer will search. In the beginning and toward the end of the game, SARGON II will automatically search more deeply.

The exception to all this is level 0 where the computer will only examine its next move at any stage of the game except where a check is involved.

The blinking asterisk beside the Ply # is just to assure you that SARGON II is in fact thinking, not asleep, out to lunch, or otherwise bombed.

To End a Game or Take Back a Move:

Wait until it is your turn. Then, if you have C1P and you have the board displayed, hit the **ESC** key to go back to the listing. If you are using a C1P version of SARGON II and you do not have the text on the screen when you perform the next step, you will disturb some of the pointers in the game and have to restart the game through the proper entry point. With the listing up, hit **CTRL R**. Now leave SARGON II, choose option **X**, or hit **BREAK**.

To Restart or Re-enter SARGON II:

To restart the program from an **EXIT** (option **X**) or a **BREAK** without reloading, type in the appropriate address followed by hitting **G**.

NOTE: If you are restarting from a **BREAK** first type **M** and then the address followed by a **G**.

	C8P & C4P	C8P DF & C4P MF	C1P	C1P MF
RE-ENTRY ADDRESSES	$0A05	$3A05	$0A5B	$3A5B

IF YOU HAVE CHOSEN CHANGE BOARD

You can now take back a move, or set up the board to play from any point in a game. If you were already in the middle of a game, the board will be displayed just as you left it. The lower left-hand corner will blink. That's your signal that you can change the contents of that square, using one of the analysis commands as follows:

A **CTRL L** leaves the contents of the square unchanged and blinks the next square to the right on the same row. If you are already at the rightmost square, it wraps around to the leftmost square in the same row and blinks that square.

A **CTRL H** leaves the contents of the square unchanged and blinks a square in the leftward direction. It wraps to the rightmost square in a similar manner.

A **CTRL J** leaves the contents of the square unchanged and blinks the next upward square in the same column. If you are already at the topmost square it wraps around to the bottommost square in the same column and blinks that square.

A **CTRL K** leaves the contents of the square unchanged and blinks the next downward square in the same column. It wraps to the top in a similar manner.

Pushing any key not otherwise listed here will empty the square.

To place a piece in a square, type in the piece code shown below, followed by the color code and the code indicating whether the piece has moved. The piece code is a letter indicating the desired piece.

K – King	**B** – Bishop
Q – Queen	**N** – Knight
R – Rook	**P** – Pawn

The color code is a letter indicating the side the piece belongs to:

W – White **B** – Black

The last code tells the computer whether the piece has moved:

0 – The piece has never moved
1 – The piece has moved

Telling the computer whether a piece has moved ensures legal castling and pawn moves, and tells SARGON II for evaluation purposes whether the piece has ever been developed.

Some Examples:

To place a black pawn on its original square, type:

PBO

A white knight in the middle of the board would be:

NW1

A black king on its original square which has, however, moved:

KB1

Hitting the **RETURN** key will terminate the blinking cycle.

SARGON II will then ask:

COLOR TO MOVE NEXT? (B,W):

Just type the appropriate letter followed by the **RETURN** key.

The next question will be:

MOVE NUMBER? (NM):

Try to enter a move number appropriate to the stage of the game you are setting up, if you don't actually know the move number. This number is taken into account by SARGON II in choosing strategy that corresponds to the stage of development of the game.

Then comes:

```
YOUR COLOR? (B,W):
```

Again, type the appropriate letter followed by **RETURN**.

Finally:

```
LEVEL OF PLAY? (0-6):
```

When you have typed the appropriate number, followed by **RETURN**, the game will automatically proceed from the point you have designated.

We wish you many thoughtful hours of good chess.

QUESTIONS AND COMMENTS

We at Hayden are constantly looking for ways to improve our products. We therefore welcome questions and comments, which should be sent to:

Hayden Book Company, Inc.
50 Essex Street
Rochelle Park, New Jersey 07662

Attention: Software Editor

SARGON II

Dan and Kathe Spracklen

Here's the program, the best of the micros, that came in third against the big machines (mainframes and maxis) at the 9th North American Computer Chess Championship! "Buy this program when it becomes available . . . unequaled in the end game . . ." *Personal Computing*, July 1979.

SARGON II is able to push passed pawns toward queening, play a strong end game, and range in deep play levels at end game without user direction. The computer displays the levels of play at which it is thinking, and also shows the move it is currently thinking of making. And by a flashing asterisk, it shows that the computer is thinking and has not accidentally hung up. The computer will keep changing the move shown until its final choice is made.

SARGON II has 7 levels of play, and levels 0-3 play in tournament time. It has a randomized opening book for all 7 levels of play through 3 moves. When setting up the board, the user can scan up and down, left and right. And finally, for those players who may need help, a special hint mode is included at all levels of play but 0 that will suggest a good but not necessarily the best move you can make. When you consider the features and play capabilities of SARGON II, it's easy to see why it's the Champ of Champs. Don't settle for anything less!

Other Hayden Computer Software:

BIOCURVE (TRS-80 Level II)
GRIDIRON: A MICROFOOTBALL GAME (TRS-80 Level II, Apple II, PET)
MICROTYPING (TRS-80 Level II, Apple II, PET)
BATTER UP!!: A MICROBASEBALL GAME (TRS-80 Level II, PET)
BACKGAMMON (TRS-80 Level II, PET)
SKETCHMODE (TRS-80 Level II)
KEYNOTE (TRS-80 Level II)
BLACKJACK MASTER (TRS-80 Level II)
MICROSAIL (PET)

Limited Warranty
Hayden Book Company, Inc., warrants that the programs contained in this unit will load and run on the standard manufacturer's configuration of the computer listed. Manufacturer, distributor, and seller shall not be liable for consequential commercial damages.

HAYDEN BOOK COMPANY, INC.
Rochelle Park, New Jersey

HAYDEN

SARGON II

1155

OSI
Model C8P
24K
03484

Copyright © 1980 by Hayden Book Company, Inc. All rights reserved.